Vladimir G. Kim, PhD
Postdoctoral Scholar at Stanford University
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My research interests include geometry analysis, computer graphics, and computer vision. I work on algorithms to infer structural, semantic, and functional attributes of objects and environments from their three-dimensional geometry. I also work on interactive tools that use this understanding to facilitate content creation, exploration, and manipulation of geometric and visual data.

Education

Ph.D. in Computer Science, Princeton University 2013
M.A. in Computer Science, Princeton University 2010
B.A. with Honors in Mathematics and Computer Science, Simon Fraser University 2008

Awards & Scholarships

Siebel Scholar (awarded annually for academic excellence and demonstrated leadership to 85 top students from the world's leading graduate schools) ..... Class of 2013
PGS-D NSERC (Postgraduate Scholarship Award) 2010-2013
PGS-M NSERC (Postgraduate Scholarship Award) 2008-2009
USRA NSERC (Undergraduate Student Research Award) ..... Spring 2007, Summer 2008
Simon Fraser University Honor Roll 2004-2008

Publications

[12] ***Creating Consistent Scene Graphs Using a Probabilistic Grammar***
Tianqiang Liu, Siddhartha Chaudhuri, Vladimir G. Kim, Qi-Xing Huang, Niloy J. Mitra, and Thomas Funkhouser
ACM Transactions on Graphics (in proceedings of SIGGRAPH Asia), 2014, to appear

[11] ***Shape2Pose: Human-Centric Shape Analysis***
Vladimir G. Kim, Siddhartha Chaudhuri, Leonidas Guibas, and Thomas Funkhouser
ACM Transactions on Graphics **33** (in proceedings of SIGGRAPH), 2014, no 4, #120

[10] ***ShapeSynth: Parameterizing Model Collections for Coupled Shape Exploration and Synthesis***
Melinos Averikou, Vladimir G. Kim, Youyi Zheng, and Niloy J. Mitra
Computer Graphics Forum **33** (in proceedings of Eurographics), 2014, no 2, pp. 125-134

[9] ***Understanding the Structure of Large, Diverse Collections of Shapes***
Vladimir G. Kim
PhD Dissertaion, Princeton University, 2013, TR-947-13

[8] ***Learning Part-based Templates from Large Collections of 3D Shapes***
Vladimir G. Kim, Wilmot Li, Niloy J. Mitra, Siddhartha Chaudhuri, Stephen DiVerdi, Thomas Funkhouser
ACM Transactions on Graphics **32** (in proceedings of SIGGRAPH), 2013, no 4, #70

[7] ***Exploring Collections of 3D Models Using Fuzzy Correspondences***
Vladimir G. Kim, Wilmot Li, Niloy J. Mitra, Stephen DiVerdi, Thomas Funkhouser
ACM Transactions On Graphics **31** (in proceedings of SIGGRAPH), 2012, no 4, #54

[6] ***Symmetry-Guided Texture Synthesis and Manipulation***
Vladimir G. Kim, Yaron Lipman, Thomas Funkhouser
ACM Transactions On Graphics **31**, 2012, no 3, #22

[5] ***Finding Surface Correspondence Using Symmetry Axis Curves***
Tianqiang Liu, Vladimir G. Kim, Thomas Funkhouser
Computer Graphics Forum **31** (in proceedings of SGP), 2012, no 5, pp. 1607-1616

[4] ***Simple Formulas For Quasiconformal Plane Deformations***
Yaron Lipman, Vladimir G. Kim, Thomas Funkhouser
ACM Transactions On Graphics **31**, 2012, no 5, #124

[3] ***Blended Intrinsic Maps***
Vladimir G. Kim, Yaron Lipman, Thomas Funkhouser
ACM Transactions On Graphics **30** (in proceedings of SIGGRAPH), 2011, no 4, #79

[2] ***Möbius Transformations For Global Intrinsic Symmetry Analysis***
Vladimir G. Kim, Yaron Lipman, Xiaobai Chen, Thomas Funkhouser
Computer Graphics Forum **29** (in proceedings of SGP), 2010, no 5, pp. 1689-1700

[1] ***Shape-based Recognition of 3D Point Clouds in Urban Environments***
Aleksey Golovinskiy, Vladimir G. Kim, Thomas Funkhouser
International Conference on Computer Vision (ICCV), 2009

Citation count: my papers have been cited 389 times (264 times in the last two years), see: http://goo.gl/lb6j4z for the most recent estimate.

Research Experience

Postdoctoral Scholar, Stanford University 2013-present
Advisor: Dr. Leonidas Guibas
Developing data-driven geometry analysis algorithms for functional and semantic understanding of shapes.

Research Assistant, Princeton University 2008-2013
Advisor: Dr. Thomas Funkhouser
Developed geometry analysis algorithms for computing shape correspondence, intrinsic symmetries, classification of point clouds and symmetry-aware processing of textures and images.

Research Intern, Creative Technology Lab, Adobe Systems Summers 2011, 2012
Advisor: Dr. Wilmot Li
Developed interfaces for interactive exploration of large and diverse collections of 3D models.

Teaching Experience

Structure-Aware Shape Processing
Niloy J. Mitra, Michael Wand, Hao Zhang, Daniel Cohen-Or, Vladimir G. Kim, and Qixing Huang
SIGGRAPH Asia 2013 Courses, #1, SIGGRAPH 2014 Courses
Co-organized the course and presented at SIGGRAPH 2014.

Data-driven Shape Analysis
Vladimir G. Kim and Qixing Huang
Instructed the course at Stanford University.

Professional Activities

Served on a program committee for Symposium on Geometry Processing 2013, 2014, and 2015, Eurographics 2014 (short papers track). Also a regular reviewer for ACM SIGGRAPH, ACM SIGGRAPH Asia, ACM Transactions on Graphics, Eurographics, Computer Graphics Forum and other major conferences and journals in the field of computer graphics.

Recommendations Letters

Leonidas Guibas, Professor, Stanford University, guibas@cs.stanford.edu
Thomas Funkhouser, Professor, Princeton University, funk@cs.princeton.edu
Niloy J. Mitra, Professor, University College London, niloym@gmail.com
Szymon Rusinkiewicz, Professor, Princeton University, smr@cs.Princeton.edu